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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/774,917

02/06/2004

Peter C. Zahrobsky

200401024-1

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12/14/2006

HEWLETT PACKARD COMPANY  
P O BOX 272400, 3404 E. HARMONY ROAD  
INTELLECTUAL PROPERTY ADMINISTRATION  
FORT COLLINS, CO 80527-2400

EXAMINER

SHEWAREGED, BETELHEM

ART UNIT

PAPER NUMBER

1774

DATE MAILED: 12/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/774,917

Applicant(s)

ZAHROBSKY ET AL.

Examiner

Betelhem Shewareged

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) 1-13 and 31-47 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14-23 and 25-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Applicant's response filed on 09/25/2006 has been fully considered. Claim 24 is canceled, and claims 1-23 and 25-47 are pending. (NOTE: Claims 1-13 and 31-47 are withdrawn from consideration as non-elected invention).

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 14-23 and 25-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohbayashi et al. (US 6,492,005 B1) in view of in view of Schliesman et al. (US 6,129,785) and Koyano et al. (US 2003/0064206 A1).

4. Ohbayashi discloses an ink jet recording sheet comprising a support and at least one ink absorptive layer provided on the support (abstract). The recording layer comprises a binder and inorganic particles (col. 13, line 33). The recording layer further comprises a hardener such as boric acid (col. 15, line 51), and a pH adjustor such as potassium carbonate (col. 16, line 30). The potassium carbonate is a weak base and it is equivalent to the claimed alkali metal salt, and when it reacts with the boric acid, bubbles having the claimed diameter are inherently generated in the ink absorptive layer.

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5. Ohbayashi does not teach that the ink absorptive layer has the claimed pH value. At the time of the invention, it would have been obvious to a person ordinary skill in the art to maintain the pH value of the ink absorptive layer within the claimed range in order to control the stability and the viscosity of the composition that would form the recording layer (see col. 2, line 58 thru col. 3, line 4 of Schliesman). Furthermore, it would have been obvious to a person of ordinary skill in the art to adjust the amount of the potassium carbonate so as to control the pH value of the layer.

6. With respect to claim 21, the use of lithium containing pH adjusting agent such as lithium carbonate is well known in the ink jet recording art before the claimed invention. See [0157] of Koyano.

7. With respect to the thickness of the ink receiving layer, the experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233. One of ordinary skill in the art would have been motivated to adjust the thickness of the ink receiving layer in order to optimize the flexibility of the recording medium and ink-absorbing properties of the layer. A prima facie case of obviousness may be rebutted, however, where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. *In re Boesch and Slaney*, 205 USPQ 215.

8. NOTE: In the reference of Ohbayashi, a high pressure homogenizer was only used during preparation of particle dispersion. The high pressure homogenizer was never used during preparation of ink absorptive layer.

***Response to Arguments***

9. Applicant's arguments with respect to claims 14-23 and 25-30 have been considered but are moot in view of the new ground(s) of rejection.

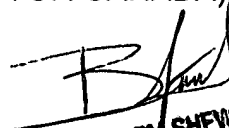
***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betelhem Shewareged whose telephone number is 571-272-1529. The examiner can normally be reached on Mon.-Fri. 8:00AM-4:30PM.

11. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

B.S.  
December 8, 2006.

  
BETELHEM SHEWAREGED  
PRIMARY EXAMINER